REMARKS

This is intended as a full and complete response to the Final Office Action dated August 16, 2007, having a shortened statutory period for response set to expire on November 16, 2007. Please reconsider the claims pending in the application for reasons discussed below.

Claim Objections

The numbering of claims has been corrected as requested by the Examiner. Accordingly, Applicants respectfully request withdrawal of the objection.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 6, 8-11, 14, 18-21 and 27-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Davis* (US 6,346,702) in view of *Cooper et al.* (US 2002/0025097) and *Wang et al.* (*Wang et al.*: "Analysis and Suppression of Continuous Periodic Interference for On-Line PD Monitoring of Power Transformers", High Voltage Engineering Symposium, 22-27 August 1999, 5.212.P5). In response, Applicants respectfully traverse the rejection.

The Examiner bears the initial burden of establishing a prima facie case of obviousness. See MPEP § 2142. To establish a prima facie case of obviousness, basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. See MPEP § 2143. Further, the Federal Circuit has recently held that even if all of the elements of a claimed invention are found in a combination of prior art references, analysis requires "consideration of two factors:

(1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and

(2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342 (Fed. Cir. 2007)

In this regard the Federal Circuit points out that in *KSR International Co. vs. Teleflex, Inc.*, 127 S. Ct. 1727 (2007) the Supreme Court "acknowledged the importance of identifying 'a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does' in an obviousness determination." *Takeda Chemical Industries, Ltd. v. Alphaphram Pty, Ltd.*, 492 F.3d 1350, 1356 (Fed. Cir. 2007).

The Examiner fails to establish at least the first criteria of a prima facie case of obviousness. As discussed herein, the references alone or in combination fail to identify a reason or suggestion for combining/modifying the references to yield the elements as claimed. In particular, the Examiner's statement that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the frequency analysis and noise gating as taught by Wang et al to the system of Davis and Cooper so that the noise can be efficiently identified and removed" is unsupported (without hindsight of the present application), based on a mischaracterization of teachings in Davis and Cooper, and incorrect.

Claims 1, 11 and 21 recite apparatus and methods that produce "a frequency spectrum of the electrical signals," perform "a frequency analysis," and include "frequency based gating." As the Examiner states, *Davis* does not disclose that "the signal processor performs a frequency analysis of the electrical signals to identify and remove periodic noise from the electrical signals." *Cooper* fails to overcome this deficiency. The Examiner states that "time and frequency are a complimentary pair" and that "if noise can be gated out in time domain, it also can be gated out in the frequency domain." However, filtering disclosed in *Cooper* (as well as *Davis*) relates to time domain instead of frequency such that there is no reason to gate in the frequency domain. Moreover, ability to transform time

domain to frequency domain does not mean that one skilled in the art would do so in the absence of some reason to make the modification.

Based on the foregoing, both *Cooper* and *Davis* lack any indication of producing "a frequency spectrum of the electrical signals," as recited in the claims. Without a disclosure in *Cooper* or *Davis* of any transform to the frequency domain, there cannot be any frequency analysis, as recited in the claims. Further, *Wang* teaches suppression of electric-magnetic interferences for partial discharge monitoring of power transformers. This suppression relates to different types of noise and an unrelated application compared to optical systems. Potential reasoning for the proposed combination assumes without evidentiary support that the electrical application of *Wang* and the optical applications suffer from analogous problems or would provide some benefit if combined. Absent teachings in the current specification there is no reason to combine *Wang* with optical systems of *Cooper* or *Davis*. Further, *Cooper* and *Davis* lack any indication of a prerequisite frequency spectrum that would provide a starting point to provide any reason for modifications of filtering taught therein to utilize techniques disclosed in *Wang*.

Therefore, *Davis et al.* and *Cooper et al.* in view of *Wang et al.* fail to render claims 1, 11 and 21 obvious. Applicants submit that claims 1, 11, and 21 and all claims dependent thereon are allowable. Accordingly, Applicants request withdrawal of the rejection and allowance of the claims.

Claims 16 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Davis et al.*, *Cooper et al.*, and *Wang et al.* in view of *Kringlebotn* (US 6,097,487). Claims 2, 12, 22, 32 and 33 (the original misnumbered claims 33 and 34) stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Davis et al., Cooper et al.*, and *Wang et al.* in view of *Keown* (US 4,143,350). In response, Applicants have canceled claims 32 and 33 and submit that *Kringlebotn* or *Keown* fail to overcome the deficiencies of *Davis et al., Cooper et al.*, and *Wang et al.* as described above regarding the independent claims from which claims 2, 12, 16, 17 and 22 depend. Therefore,

Applicants respectfully request withdrawal of the rejection and allowance of claims 2, 12, 16, 17 and 22.

Conclusion

Having addressed all issues set out in the Final Office Action, Applicants respectfully submit that the claims are in condition for allowance and respectfully request that the claims be allowed.

Although Applicants believe that no additional fees are due in connection with this response, the Commissioner is hereby authorized to charge counsel's Deposit Account No. 20-0782/WEAT/0414/RWR, for any fees, including extension of time fees or excess claim fees, required to make this response timely and acceptable to the Office.

Dated: November 16, 2007

Respectfully submitted,

/Randol W. Read, Reg. No. 43,876/

Randol W. Read
Registration No.: 43,876
PATTERSON & SHERIDAN, LLP
3040 Post Oak Blvd, Suite 1500
Houston, Texas 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney For Applicants